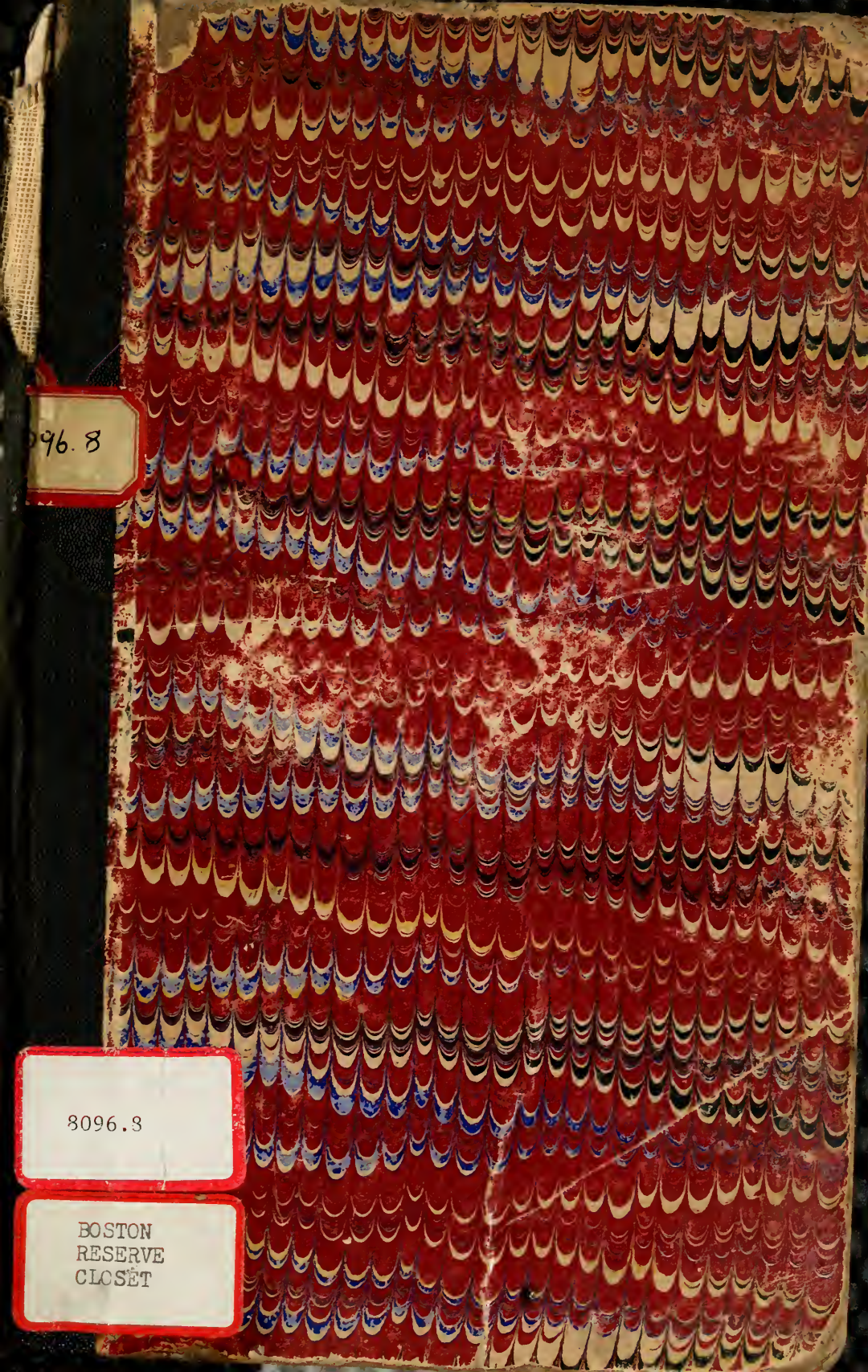
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BOSTON
RESERVE
CLOSET

Accessions
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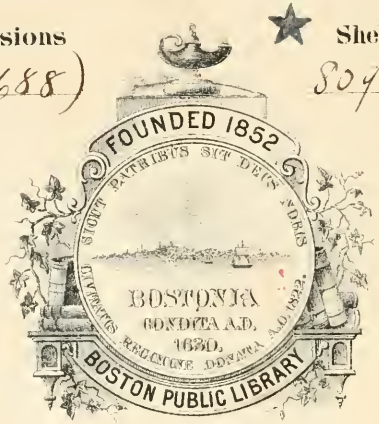

Received July 1, 1892.

PRESENTED BY
THOMAS MINNS.
BOSTON.

AN ACT IN ADDITION TO AN ACT TO PROVIDE FOR THE REGULATION AND INSPECTION OF BUILDINGS, THE MORE EFFECTTAL PREVENTION OF FIRE, AND THE BETTER PRESERVATION OF LIFE AND PROPERTY IN BOSTON.

Be it enacted by the Senate and House of Repreientatives, in Geue'al Court assembled, and by the authority of the same, as follows: —

Buildings other than dwelling-houses shall have walls of the following thickness: —

Party and external *floor-bearing* walls, which do not exceed 55 feet in height, measured from the top of the first floor above the street, shall be not less than 20 inches thick from the foundation to the under side of the timbers of the first floor above the street; thence 16 inches thick to the under side of the timbers of the upper floor of the building; thence not less than 12 inches thick for the remaining height.

Party and external walls of the above height *not* bearing floors, to be not less than 16 inches thick from the foundation to the under side of the timbers of the second floor above the street; thence not less than 12 inches thick for the remaining height.

Foundations for the aforesaid walls to be of stone, laid in horizontal courses, not less than 24 inches thick to the top of the ground; and the bottom course in all cases to be not less than 30 inches wide.

Party and external *floor-bearing* walls exceeding 55 feet in height, measured from the top of the first floor above the street, shall be not less than 20 inches thick, from the foundations to the under side of the timbers of the second floor above the street, thence not less than 16 inches thick, to the under side of the floor-beams of the upper floor of the building; and thence, not less than 12 inches thick for the remaining height. Provided, however, that in the case of a building not more than 25 feet in width, and 75 feet in depth, the thickness of wall in the first story above the street may be reduced four inches.

Party and external walls of the above height, *not* bearing floors,

to be not less than 16 inches thick from the foundations to the under side of the timbers of the third floor above the street, thence not less than 12 inches thick for the remaining height.

Foundations for party-walls of the aforesaid heights, to be of block-stone, laid in horizontal courses, not less than 24 inches thick; and for external walls, not less than 30 inches thick.

The bottom course to be at least 6 inches wider than the block stone wall resting thereon.

In all buildings over 30 feet in width, not having either brick partition walls, or girders supported by columns running from front to rear, the external walls shall be increased 4 inches in thickness.

The amount of materials above specified for external walls may be used either in piers or buttresses, provided the external walls between the said piers or buttresses shall in no case be less than 12 inches thick.

SECT. 2. DWELLING-HOUSE WALLS *less than 55 feet in height*, measured from the top of the 1st floor above the street, shall not be less than 12 inches thick, and shall have foundations in block-stone, laid in horizontal courses not less than 18 inches thick, or, if of brick, not less than 16 inches thick, laid in cement.

Dwelling-house walls *more than 55 feet in height*, measured from the top of the 1st floor above the street, shall be not less than 16 inches thick, from the foundation to the under side of the floor timbers of the first floor abve the street, and not less than 12 inches thick for the remaining height, and shall have foundations of block-stone in horizontal courses, or of brick laid in cement, not less than 20 inches thick.

SECT. 3. The thickness of all foundation walls laid with irregular rubble work, shall be one-fourth greater than the thickness given for block-stone walls.

SECT. 4. The external walls of buildings intended to be used for stables, or for workshops of a light character, may be built of a less thickness than hereinbefore specified; provided, that any such building shall not exceed 30 feet in height above the sidewalk to its highest point, and 40 feet in width, and that the said walls shall in no case be less than 12 inches thick.

Sect. 5. Vaulted walls may be used instead of solid walls, provided that there be continuous vertical withes, not over 3 feet apart, thoroughly bonding or tying the two portions of the wall; and also provided, that in addition to these withes the amount of brick-work at any point shall not be less than 16 inches thick for party walls of stores, nor less than 12 inches for dwellings.

In every brick wall, at least every seventh course of brick shall be a heading course, except where walls are faced with face-brick, in which case every seventh course may be bonded with Flemish headers or by cutting the course of the faced brick, and putting in diagonal headers behind the same, or by splitting face-brick in half, and backing the same by a continuous row of headers.

In all walls which are faced with thin ashlar, anchored to the backing, or in which the ashlar has not either alternate headers and stretchers in each course, or alternate heading and stretching courses, the backing of brick shall not be less than 12 inches thick, and each stone of such ashlar work shall be securely tied to the backing by one or more suitable metal anchors.

The backing in all ashlar walls shall be of such thickness as to make all such walls, the facing of which is less than 4 inches thick, independent of the facing, conform, as to thickness, with the requirements of sections one and two of this act.

Sect. 6. Iron or wooden girders, supported upon iron or wooden columns, or brick piers, may be substituted in place of partition or party walls, and shall be made of sufficient strength to bear safely the weight which they are intended to support, in addition to the weight of material employed in their construction, and shall have a foundation of levellers for each column not less than 3 feet 6 inches square, and 1 foot 6 inches thick.

Such columns shall not be more than 12 feet apart on the line of the girders, if the girders resting thereon be entirely of wood.

Sect. 7. It shall not be lawful to erect, construct or build any rear, front, party, division or partition wall, upon wooden girders, rafters or lintels, or to support any such wall by any wooden support whatever; but all such supports shall be of iron, brick, or stone, and of sufficient size and strength to support the superstructure. All

lintels used to support walls or other weights over openings, shall be of sufficient strength and bearing to carry the superimposed weight, and shall, when supported at the end by brick walls or piers, res upon a suitable iron plate.

No floor-beams shall be supported wholly upon any wood partition, but every beam (except headers and tail-beams) shall rest, at one end, not less than 4 inches on the wall, or upon a girder, as authorized by this act. And every trimmer or header more than 5 feet long, used in any building except a dwelling, shall be hung in stirrup-irons, of suitable thickness for the size of the timbers.

No timber shall be used in any wall of any building, except arched lintels, for interior openings, as may be approved of by the Inspector of Buildings.

The butts or ends of all floor beams and rafters entering a brick wall shall be cut on a splay of 3 inches in their width, or be cut off obliquely on their upper edge from the face of the wall to a point 3 inches down on the butt.

All main partitions not having a direct vertical support shall be trussed, and when two are directly over each other they shall, as far as practicable, head and foot against each other, with a hard-wood strip between.

All piers shall be built of good, hard, well burnt brick, thoroughly bonded and laid in cement mortar.

Isolated brick piers under all lintels, girders, iron or other columns shall have a cap iron at least 2 inches thick, or a granite cap stone at least 12 inches thick, the full size of the pier.

In the case of an external brick pier the plate may be reduced sufficiently in size to allow 4 inches of brick-work to intervene between the edge or edges of the plate and the face or faces of the pier exposed to the weather.

Columns supported by brick walls or piers shall rest upon an iron plate at least 2 inches thick, — or upon a granite cap stone at least 12 inches thick, of a size satisfactory to the Inspector of Buildings.

Under hollow iron columns shall in all cases be an iron plate of suitable thickness.

Sect. 8. Recesses in party walls and recesses and openings in external walls may be made, subject to the approval of the Inspector of Buildings.

Sect. 9. In all calculations for the strength of materials to be used in any building, the proportion between the safe weight and the breaking weight shall be as one to three, for all beams, girders and other pieces subjected to a cross strain; and as one to six for all posts, columns and other vertical supports, tie-rods, tie-beams and other pieces subjected to a tensile strain; and the requisite dimensions of each piece of material is to be ascertained by computation by the rules given by the best authorities, using for constants in the rules only such numbers as have been deduced from experiments on materials of like kind with that proposed to be used.

Sect. 10. In no case shall the side, end, or party wall of any building be carried up in advance of the rear walls. The front, rear, side, end and party walls of any building hereafter to be erected shall be anchored to each other every 10 feet in their height, by tie anchors, made of at least one and a quarter inch, by three-eighths of an inch, wrought iron. The said anchors shall be built into the side, or party walls not less than 36 inches; and into the front and rear walls at least one-half the thickness of the front and rear walls; so as to secure the front and rear walls to the side, end, or party walls.

The side, end, or party walls shall be anchored at each tier of beams, at intervals of not more than 10 feet apart, with good strong wrought-iron anchors, at least one-half inch by one and one-half inch; well built into the side walls, and fastened to the beams, and where the beams are supported by girders, the ends of the beams resting on the girder shall be butted together, end to end, and strapped by wrought-iron straps or tie irons, at the same distances apart, and on the same beams as the wall anchors, and shall be well fastened.

All mortar shall be of the best quality for the purpose for which it is applied.

Sect. 11. All party walls shall be carried up to a height of not

less than 1 foot above the roof covering, with the full thickness of the party wall, and shall be covered with copper, tin or iron securely fastened. And where there is a flat, hip, or pitch roof, the party wall shall be carried up to a height of not less than 1 foot above the roof covering, at every part of said roof, and shall be corbelled at least 12 inches, or to the outer edge of all projections on the front or rear walls of the building. And where the roof is of the kind known as Mansard, or French, or of any style excepting as above specified, unless the same is constructed of fire-proof materials throughout, the party wall shall be carried up to a height of not less than 1 foot above the flat or upper slope of said roof, and shall extend through the roof covering of the lower slope not less than 8 inches, and be coped or covered with metal or stone, provided, that if a gutter-stone of suitable dimensions and properly balanced shall be inserted, it shall be equivalent to corbelling.

SECT. 12. All roof or floor timbers entering the same party wall from opposite sides shall have at least four inches solid brick-work between the ends of said timbers.

SECT. 13. In all stores or warehouses that may hereafter be built in said city, in which a side or rear wall shall have windows or doors opening upon an area of less than 18feetin width, all such windows and doors above the second story, shall be provided with blinds or shutters made of, or covered with metal.

When in any such building the shutters, blinds or doors cannot be put on the outside of such door or window, they shall be put on the inside, and if placed on the inside shall be hung upon an iron frame independent of the wood work of the window-frame or door; and every such door, blind, or shutter shall be closed upon the completion of the business of each day by the occupant having the use or control of the same; and all fire-proof shutters or blinds, that now are or may hereafter be put upon the front or sides of any building on the street fronts, must be so constructed that they can be closed and opened from the outside above the first story, if made wholly of iron.

In any building hereafter to be erected, to be occupied as a tenement or lodging-house, in which the lower part thereof is intended

to be used for business purposes of any kind, the hall partitions from the cellar to the top of the second story beams shall be built of brick.

SECT. 14. Any building already erected, or that may hereafter be erected, in which operatives are employed in any of the stories above the second story, shall be provided with such fire-escapes as shall be directed and approved by the Inspector of Buildings. And the owner or owners of any building upon which any fire-escapes may now be, or may hereafter be erected, shall keep the same in good repair and well painted. And no person shall, at any time, place any incumbrance whatever upon any said fire-escapes now erected, or that may hereafter be erected in said city.

SECT. 15. All buildings in the City of Boston hereafter to be built, shall have scuttle-frames and covers, or bulkheads and doors on the roof, made of or covered with some fire-proof material, and all scuttles shall have stationary ladders leading to the same, and all such scuttles or ladders shall be kept so as to be ready for use at all times, and all scuttles shall not be less in size than 2 by 3 feet; and if a bulkhead is used or substituted in any building in place of a scuttle, it shall have stairs with a sufficient guard or hand-rail leading to the roof; and in case the building shall be a tenement-house, the door in the bulkhead, or any scuttle, shall at no time be locked, but may be fastened on the inside by moveable bolts or hooks.

SECT. 16. No smoke-pipe in any building with wooden or combustible floors and ceilings shall hereafter enter any flue, unless the said pipe where it enters the flue shall be at least 12 inches from either the floors or ceilings; and in all cases where smoke-pipes pass through stud or wooden partitions of any kind, whether the same be plastered or not, they shall be guarded by a soapstone ring, not less than 4 inches in thickness, and extend through the partition. In all cases where hot water, steam, hot air, or any other furnaces are used, the furnace smoke-pipe must be kept at least 2 feet below the beams or ceiling above the same, unless said beams or ceiling shall be properly protected by a shield or tin plate suspended at least one inch below said beams or ceiling above said smoke-pipe; and the

top of all furnaces set in brick must be covered with brick, supported by iron bars, and so constructed as to be perfectly tight; said covering to be in addition to, and not less than 6 inches from, the ordinary covering to the hot air-chamber. If, however, there is not height enough to build the furnace-top to at least 4 inches below the floor-beams or ceilings, then the floor-beams must be trimmed around the furnace and said covering, and the trimmers and headers must be at least 4 inches from the same. The top of every portable furnace not set in brick shall be kept at least one foot below the beams or ceiling with a shield of tin, made tight, and suspended not less than one inch below the said beams or ceilings, and extended one foot beyond the top of the furnace on all sides. All hot-air registers hereafter placed in the floor of any building shall be set in soapstone borders, not less than 2 inches in width. All soapstone borders to be firmly set in plaster of Paris or gauged mortar. All floor-register boxes to be made of tin plate, with a flange on the top to fit the groove in the soapstone, the register to rest upon the same. There shall also be an open space of one inch on all sides of the register box, extending from the under side of the ceiling, below the register, to the soapstone in the floor; the outside of said space to be covered with a casing of tin plate, made tight on all sides, to extend from the under side of the aforesaid ceiling up to and turn under the said soapstone. Registers of 15 by 25 inches or more shall have a space of 2 inches. No wood-work shall be placed at a less distance than one inch from any tin, or other metal flue or flues, pipe or pipes, used or intended to be used to convey heated air in any building, unless protected by a soapstone or earthern ring or tube, or a metal casing so constructed as to permit free circulation of air around said pipes or flues. In all cases where hot-water, steam, hot-air, or other furnaces are hereafter placed, or their location changed, in any building, due notice shall first be given to the Inspector of Buildings, by the person or persons placing said furnace or ranges in said building.

In all cases where ranges or boilers are set, the outside of the flue to the same shall be plastered on the outside directly upon the bricks up to the ceiling of the room.

Sect. 17. If any chimney, flue or heating apparatus on any premises in the City of Boston shall, in the opinion of the Inspector of Buildings, be dangerous or unsafe by reason of endangering the premises by fire or otherwise, the Inspector shall at once notify in writing the owner, agent or other party having an interest in said premises, and shall require him to make the same safe; and upon neglect of said person so notified to comply with the provisions of said notice, for a period of 24 hours after the service of said notice upon him, he shall at once become liable to a penalty of not less than 20 nor more than 50 dollars for every day's continuance of said unsafe structure.

Sect. 18. All boiler-rooms hereafter constructed in any building other than dwelling-houses shall be constructed of brick and iron, and shall be so arranged that all openings between the said boiler-room, and other parts of the building in which it is placed, shall be closed by iron or metal covered doors, which shall be securely closed at the close of each day.

Upon a license being granted by the Mayor and Board of Aldermen of the City of Boston, for the erection of a steam-boiler, engine, or furnace for melting glass, iron, or other metal, in any building in the said city, the person or persons receiving said license shall, before setting, erecting, or placing said boiler, engine, or furnace, file an application for a permit therefor with the Inspector of Buildings, who shall prescribe such regulations for the setting or placing thereof as the public safety may require; and no person or persons shall erect, set, or place any such boiler, engine, furnace or oven, without a permit from said Inspector.

All brick flues hereafter constructed for ranges, boilers, furnaces, and ovens shall be 8 inches in thickness to the height of the top of the first floor above such ranges, boilers, furnaces, or ovens, and ranges set in brickwork shall in all cases be placed on solid foundations, not on trimmers.

Sect. 19. No Mansard or other roof shall hereafter be constructed more than one story in height, nor more than 20 feet in height from the upper floor of the building upon which it is placed to the

highest part of said roof, unless the same is constructed of fire-proof material throughout. No bay window shall be constructed of wood, which shall extend more than 3 feet above the second story from the street.

All the exterior projections of any building or building hereafter erected which are more than 45 feet above the level of the sidewalk shall be made of or covered with non-combustible material, to be approved by the Inspector of Buildings. All fire-proof cornices shall be well secured to the walls with iron anchors, independent of any wood-work; and in all cases the walls shall be carried up to the planking of the roof, and where the cornice projects above the roof, the wall shall be carried up to the top of the cornice; and all exterior wooden cornices that shall hereafter require to be replaced, shall be constructed of some non-combustible material, as required for new buildings; and all exterior wooden cornices or gutters that may hereafter be damaged by fire shall be taken down, and if replaced shall be constructed of fire-proof material.

All buildings hereafter erected shall be kept provided with proper metallic leaders for conducting the water from the roof to the ground, sewer, or street gutter, in such manner as shall protect the walls and foundations from damage; and in no case shall the water from the said leaders be allowed to flow upon the sidewalk, but shall be conducted by drain-pipe, or pipes, to the street gutter or sewer.

Sect. 20. In all buildings intended to be used for offices, dwellings, stores, warehouses, factories or stables, hereafter erected, the extreme height to which a roof framed or constructed of wood and covered with non-combustible material, may be carried, shall be limited to 75 feet above the level of the sidewalk at its highest point. Where a building abuts upon streets of different grades, the height shall be measured from the highest street.

A roof may, however, exceed in its extreme height the aforesaid limit, providing it be constructed entirely of fire-proof materials — as follows: —

All joists, beams, rafters, purlins, jack rafters, plates, struts, ties,

arches, shall be made of cast or wrought iron, or some other metal, stone, brick, cement, mortar or other incombustible material, and covered with corrugated iron, sheet or cast iron, tin, copper, zinc, or other metal, or slate, stone, brick, cement, mortar or other incombustible material; and all structures or projections above or outside of the roof, such as domes, cupolas, pavilions, towers, spires, pinnacles, buttresses, lanterns, louvres, luthern and dormer windows, skylights, scuttles, ventilators, cornices, gutters, shall be made, constructed, framed and covered with cast or wrought iron, tin, copper, zinc or other metal or stone, slate, brick, cement, or mortar, or other incombustible material.

Sect. 21. No building already erected or hereafter to be built in said city shall be raised or built upon in such manner that were such building wholly built or constructed after the passage of this act it would be in violation of any of the provisions of this act. And before any building built of stone, brick or iron, or any wooden building with or without a brick front, in any part of said city, shall be enlarged, raised, altered, or built upon, the same shall be first examined by the said Inspector to ascertain if the building or buildings, or either of them, are in a good and safe condition to be enlarged, raised, altered, or built upon; and no such buildings as aforesaid shall be enlarged, raised, altered, or built upon until after such examination and decision; and the decision of said Inspector under such examination shall be final and conclusive in the premises, except as hereinafter provided, and shall be made without delay.

Sect. 22. The Inspector of Buildings shall have full power to pass upon any question arising under the provisions of this act relative to the manner of construction or materials to be used in the erection, alteration or repair of any building in the City of Boston, and he may require that plans or a description of the proposed erection, alterations or repairs shall be submitted for inspection before issuing his permit; provided, however, that should any question arise between the Inspector of Buildings and the owner or architect of any building, or should the owner or architect object to any order or decision of said Inspector, the matter shall be referred to a committee of three persons, who

shall be either architects or master builders, one to be chosen by the Inspector of Buildings, one by the owner or other interested party, and these two shall choose a third, and the decision of these referees, submitted in writing, shall be final and conclusive in the premises.

PENALTIES.

Sect. 23. If any person or persons, whether owner or owners, contractor or contractors, builder or builders, shall begin to erect, construct, build, or alter any building or structure, within the City of Boston, without first applying for a permit from the Inspector of Buildings of said city, such person or persons shall forfeit and pay the sum of not less than one hundred dollars nor more than one thousand dollars for each and every such offence; and if any person or persons, as aforesaid, shall wilfully violate any or either of the provisions of this act, or the act of which this act is an amendment, or of any other act in amendment thereof, for the violation of which no other penalties are therein or hereinbefore provided, he or they shall forfeit and pay not less than one hundred dollars, and not more than one thousand dollars, for each and every such violation; and the further sum of one hundred dollars for each and every week that he or they shall wilfully maintain any building or structure in violation of any provision of this act, or of the act of which this act is an amendment, or of any other act in amendment thereof. All penalties under this act shall be recoverable by the City of Boston in an action of tort. If any person or persons, whether owner or owners, contractor or contractors, builder or builders, shall erect or alter any building or structure in the City of Boston, in violation of any or either of the provisions of this act, or of the act of which this act is an amendment, or of any amendment thereof, it shall be lawful for the Supreme Judicial Court, or any justice thereof, either in term-time or in vacation, to issue forthwith an injunction, restraining such person or persons, from further progress in said work, until the facts of the case shall have been investigated and determined; and if it shall appear to said court or any Justice thereof, upon such investigation, that such

building or structure does not, in all respects, conform to the provisions of this act, and of the act of which this act is an amendment, and of all amendments thereof, said court or justice shall issue an injunction to restrain the continuance of the work upon such building or structure, and shall order the same to be made to conform to the requirements of the law within a time to be fixed by said court or justice.

SECT. 24. The provisions of this act shall not apply to the passenger stations of the Boston and Lowell, and Boston and Providence Railroad Corporations, now in process of erection in the City of Boston; but such precautions shall be provided for protection against, and for the extinguishment of fire, under the penalties of this act, as the Inspector of Public Buildings shall require.

SECT. 25. The Inspector and Assistant Inspector of the Department for the Survey and Inspection of Buildings in the City of Boston shall be able and experienced architects, builders or mechanics, competent to perform all the duties of the office to which they are appointed, and such Inspectors shall not be employed or engaged in any other vocation, or be interested in any contract or contracts for building or for furnishing materials.

SECT. 26. Chapter 371 of the acts of 1872 and all other acts and parts of acts inconsistent with the provisions of this act are hereby repealed.

SECT. 27. This act shall take effect upon its passage.

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